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## BTS Data

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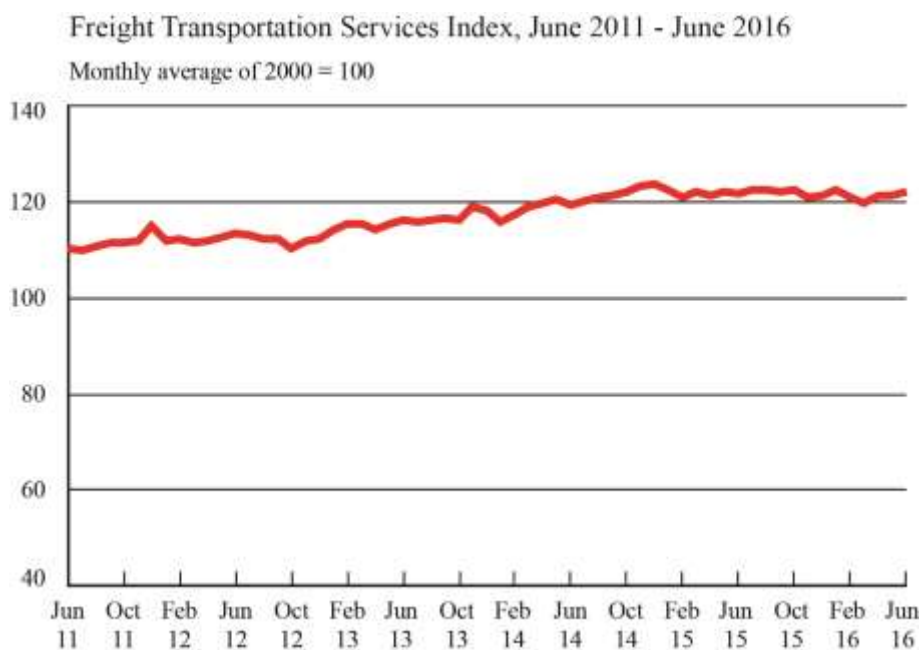
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### June 2016 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, rose 0.6 percent in June from May, rising for the third consecutive month, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The June 2016 index level (122.3) was 29.1 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).





The level of freight shipments in June measured by the Freight TSI (122.3) was 1.1 percent below the all-time high level of 123.7 in December 2014 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The May index was revised to 121.6 from 121.8 in last month's release. The January index was revised down slightly.

The Freight TSI measures the month-to-month changes in freight shipments by mode of transportation in tons and ton-miles, which are combined into one index. The index measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight.

**Analysis:** The June Freight TSI increase of 0.6 percent from May was broad in terms of mode. All freight modes grew except for water and rail intermodal which declined after significant rises in May. The June increase was driven by growth in the mining (including oil and gas well drilling and servicing), utility and manufacturing sectors of the economy. The [Federal Reserve Board Industrial Production index](#) rose 0.6 percent in June. Housing starts were 4.8 percent above the May level and employment grew by 287,000 jobs.

The second quarter TSI increase of 2.2 percent from the first quarter matched trends in the larger economy. [Gross Domestic Product](#) (GDP) growth increased at the moderate annual pace of 1.2 percent in the second quarter although Industrial Production declined during the quarter.

**Trend:** The 0.6 percent Freight TSI rise in June from May was the third consecutive monthly increase. The combined growth of 2.2 percent over the three months from March to June was the first time the TSI rose three months in succession since December 2014. The three months of successive increases followed two months of successive decline, leaving the June level 0.2 percent below the level of January 2016 and 1.1 percent below the December 2014 peak of 123.7.

The second quarter increase of 2.2 percent was the largest quarterly rise since the first quarter of 2013. It followed two quarters of decline and declines in four of the previous five quarters. The index remains high compared to earlier years, rising 29.1 percent since the low of 94.7 in April 2009. For additional historical data, go to [TSI data](#).

**Index highs and lows:** For-hire freight shipments in June 2016 (122.3) were 29.1 percent higher than the recent low in April 2009 during the recession (94.7). The June 2016 level was 1.1 percent below the historic peak reached in December 2014 (123.7).

**Year to date:** Freight shipments measured by the index were up 0.7 percent in June compared to the end of 2015 (Table 3).

**Long-term trend:** For-hire freight shipments are up 10.9 percent in the five years from June 2011 and are up 8.2 percent in the 10 years from June 2006 (Table 5).

**Same month of previous year:** June 2016 for-hire freight shipments were up 0.4 percent from June 2015 (Tables 4, 5).

**2nd quarter changes:** The Freight TSI rose 2.2 percent in the April-June quarter following two consecutive quarterly declines (Table 10).



The TSI includes only domestic "for-hire" freight and passenger transportation. For-hire transportation consists of freight or passenger transport services provided by a firm to external customers for a fee. The TSI does not include taxi services, paid ride services in personal motor vehicles (e.g., Uber, Lyft, etc.), intercity bus services, in-house transportation (vehicles owned and operated by private firms for their own use), or noncommercial passenger travel (e.g., trips in the household car).

The TSI uses seasonally-adjusted data on for-hire freight and passenger transportation services to create three indexes measuring monthly changes in transportation services output from the base year of 2000. The three indexes are for-hire freight shipments, passenger travel, and a combined measure that merges freight and passenger indexes. See [Seasonally-Adjusted Transportation Data](#) for numbers for individual modes. TSI includes data from 2000 to the present. Release of the July index is scheduled for Sept. 14.

**Passenger Index:** The TSI for passengers rose 0.1 percent in June from its May level (Table 6). The Passenger TSI June 2016 level of 124.2 was 1.4 percent above the June 2015 level (Table 7). The index is up 8.7 percent in five years and up 12.0 percent in 10 years (Table 5). The passenger TSI measures the month-to-month changes in travel that involves the services of the for-hire passenger transportation sector. The seasonally adjusted index consists of data from air, local transit and intercity rail.

**Combined Index:** The combined freight and passenger TSI rose 0.4 percent in June from its May level (Table 8). The combined TSI June 2016 level of 123.0 was 0.7 percent above the June 2015 level (Table 9). The combined index is up 10.3 percent in five years and up 9.2 percent in 10 years (Table 5). The combined TSI merges the freight and passenger indexes into a single index.

**Revisions:** Monthly data has changed from previous releases due to the use of concurrent seasonal analysis, which results in seasonal analysis factors changing as each month's data are added.

BTS research has shown a clear relationship between economic cycles and the Freight and Passenger Transportation Services Indexes. See a [study of this relationship](#) using smoothed and detrended TSI data. Researchers who wish to compare TSI over time with other economic indicators, can use the [FRED database](#), which includes freight, passenger and combined TSI, and which makes it possible to easily graph TSI alongside the other series in that database. See [TSI data on FRED](#).

For a webinar on the TSI, see [Past Webinars](#). For a video explanation of the TSI, see [Overview of the Transportation Services Index](#). A BTS report explaining the TSI, [Transportation Services Index and the Economy](#), is available for download.

**Table 1: Freight, Passenger and Combined Transportation Services Indexes since December 2015**  
**Percent Change from Previous Month**



(Seasonally Adjusted, Monthly Average of 2000 = 100)

	Freight		Passenger		Combined	
	Index	Pct. Change	Index	Pct. Change	Index	Pct. Change
December	121.4	<b>0.3</b>	124.2	<b>0.9</b>	122.3	<b>0.4</b>
January	122.5	<b>0.9</b>	123.2	<b>-0.8</b>	122.8	<b>0.4</b>
February	120.9	<b>-1.3</b>	123.8	<b>0.5</b>	121.9	<b>-0.7</b>
March	119.7	<b>-1.0</b>	122.2	<b>-1.3</b>	120.5	<b>-1.1</b>
April	121.5	<b>1.5</b>	123.7	<b>1.2</b>	122.3	<b>1.5</b>
May	121.6	<b>0.1</b>	124.1	<b>0.3</b>	122.5	<b>0.2</b>
<b>June</b>	122.3	<b>0.6</b>	124.2	<b>0.1</b>	123.0	<b>0.4</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.



**Table 2: Freight Transportation Services Index Monthly Changes, 2013-2016**  
**Percent change from previous month**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
	<b>% Change</b>	<b>% Change</b>	<b>% Change</b>	<b>% Change</b>
January	1.6	-1.8	-0.8	0.9
February	1.0	1.2	-1.5	-1.3
March	0.2	1.4	1.2	-1.0
April	-1.0	0.5	-0.9	1.5
May	1.0	0.6	0.8	0.1
June	0.4	-0.7	-0.4	0.6
July	-0.3	0.7	0.7	
August	0.4	0.5	0.1	
September	0.3	0.3	-0.5	
October	-0.3	0.7	0.5	
November	2.3	1.1	-1.5	
December	-0.7	0.2	0.3	

SOURCE: Bureau of Transportation Statistics

**Table 2A: Freight Transportation Services Index by Month, 2013-2016**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
January	114.3	116.1	122.7	122.5
February	115.4	117.5	120.9	120.9
March	115.6	119.2	122.4	119.7
April	114.5	119.8	121.3	121.5
May	115.7	120.5	122.3	121.6
June	116.2	119.6	121.8	122.3
July	115.9	120.4	122.7	
August	116.4	121.0	122.8	
September	116.7	121.4	122.2	
October	116.3	122.2	122.8	
November	119.0	123.5	121.0	
December	118.2	123.7	121.4	

SOURCE: Bureau of Transportation Statistics



**Table 3: Freight, Passenger and Combined Transportation Services Indexes Year-to-Date Change, 2007-2016**  
**Percent change to June from December of the previous year**

<b>Year</b>	<b>Freight</b>	<b>Passenger</b>	<b>Combined</b>
2007	-0.8	2.7	0.3
2008	-0.7	0.1	-0.5
2009	-4.2	-1.6	-3.4
2010	4.8	1.4	3.7
2011	1.4	1.0	1.3
2012	-1.6	-0.4	-1.2
2013	3.3	1.6	2.7
2014	1.2	1.7	1.3
2015	-1.5	1.4	-0.7
<b>2016</b>	<b>0.7</b>	<b>0.0</b>	<b>0.6</b>

SOURCE: Bureau of Transportation Statistics

**Table 4: Freight Transportation Services Index from Year-to-Year Percent Change in the June Freight TSI**  
**(Monthly average of 2000 = 100)**

	<b>June Freight TSI</b>	<b>Percent change from same month previous year</b>
2007	109.7	-2.9
2008	109.9	0.2
2009	96.1	-12.6
2010	106.4	10.7
2011	110.3	3.7
2012	113.5	2.9
2013	116.2	2.4
2014	119.6	2.9
2015	121.8	1.8
<b>2016</b>	<b>122.3</b>	<b>0.4</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.



**Table 5: Transportation Services Indexes from Previous Years  
Percent Change to 2016 (June to June)**

Since June ...	Duration in years	Freight TSI Percent change to June 2016	Passenger TSI Percent change to June 2016	Combined TSI Percent change to June 2016
2015	1	0.4	1.4	0.7
2014	2	2.3	3.7	2.8
2013	3	5.2	5.4	5.4
2012	4	7.8	7.8	7.8
2011	5	10.9	8.7	10.3
2010	6	14.9	11.0	13.8
2009	7	27.3	14.4	23.2
2008	8	11.3	6.7	9.8
2007	9	11.5	6.4	9.8
2006	10	8.2	12.0	9.2

SOURCE: Bureau of Transportation Statistics

**Table 6: Passenger Transportation Services Index Monthly Changes, 2013-2016  
Percent change from previous month**

	2013 % Change	2014 % Change	2015 % Change	2016 % Change
January	0.9	-0.1	-0.8	-0.8
February	-0.2	-0.3	-1.3	0.5
March	-0.5	2.2	2.5	-1.3
April	0.7	-0.1	0.2	1.2
May	0.0	0.5	0.2	0.3
June	0.7	-0.6	0.6	0.1
July	-0.9	0.1	2.5	
August	0.7	0.4	-2.6	
September	-0.1	-0.2	0.5	
October	0.2	0.2	1.2	
November	0.9	-0.7	-1.0	
December	-0.7	1.0	0.9	

SOURCE: Bureau of Transportation Statistics



**Table 7: Passenger Transportation Services Index from Year-to-Year**  
**Percent change in the June Passenger TSI**  
**(Monthly average of 2000 = 100)**

	<b>June Passenger TSI</b>	<b>Percent change from same month previous year</b>
2007	116.7	5.2
2008	116.4	-0.3
2009	108.6	-6.7
2010	111.9	3.0
2011	114.3	2.1
2012	115.2	0.8
2013	117.8	2.3
2014	119.8	1.7
2015	122.5	2.3
<b>2016</b>	<b>124.2</b>	<b>1.4</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 8: Combined Transportation Services Index Monthly Changes, 2013-2016**  
**Percent change from previous month**

	<b>2013 % Change</b>	<b>2014 % Change</b>	<b>2015 % Change</b>	<b>2016 % Change</b>
January	1.4	-1.3	-0.8	0.4
February	0.6	0.8	-1.4	-0.7
March	0.0	1.6	1.6	-1.1
April	-0.4	0.3	-0.5	1.5
May	0.6	0.6	0.6	0.2
June	0.5	-0.7	-0.1	0.4
July	-0.4	0.5	1.3	
August	0.5	0.5	-0.8	
September	0.2	0.2	-0.2	
October	-0.2	0.5	0.7	
November	1.9	0.6	-1.2	
December	-0.7	0.4	0.4	

SOURCE: Bureau of Transportation Statistics



**Table 9: Combined Transportation Services Index from Year-to-Year**  
**Percent change in the June Combined TSI**  
**(Monthly average of 2000 = 100)**

	June Combined TSI	Percent change from same month previous year
2007	112.0	-0.5
2008	112.0	0.0
2009	99.8	-10.9
2010	108.1	8.3
2011	111.5	3.1
2012	114.1	2.3
2013	116.7	2.3
2014	119.7	2.6
2015	122.1	2.0
<b>2016</b>	<b>123.0</b>	<b>0.7</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 10: Freight Transportation Services Index Change by Quarter, 2007-2016**  
**Percent change from the last month of the previous quarter**

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	1.1	-1.9	-0.3	1.2
2008	-0.7	0.0	-2.5	-6.4
2009	-4.4	0.2	3.3	2.2
2010	3.9	0.9	0.6	1.7
2011	1.7	-0.4	1.0	3.5
2012	-3.4	1.9	-1.1	0.3
2013	2.8	0.5	0.4	1.3
2014	0.8	0.3	1.5	1.9
2015	-1.1	-0.5	0.3	-0.7
<b>2016</b>	<b>-1.4</b>	<b>2.2</b>		

SOURCE: Bureau of Transportation Statistics



**Table 11: Passenger Transportation Services Index Change by Quarter, 2007-2016**  
Percent change from the last month of the previous quarter

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	2.6	0.2	0.8	-1.1
2008	0.4	-0.3	-3.7	-1.5
2009	-1.7	0.1	0.9	0.7
2010	0.3	1.1	1.2	0.0
2011	0.3	0.7	0.7	0.5
2012	0.3	-0.7	0.5	0.2
2013	0.2	1.4	-0.3	0.3
2014	1.9	-0.2	0.3	0.5
2015	0.4	1.0	0.3	1.1
<b>2016</b>	<b>-1.6</b>	<b>1.6</b>		

SOURCE: Bureau of Transportation Statistics

**Table 12: Combined Transportation Services Index Change by Quarter, 2007-2016**  
Percent change from the last month of the previous quarter

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	1.5	-1.2	0.0	0.5
2008	-0.4	-0.1	-2.8	-5.1
2009	-3.5	0.1	2.6	1.8
2010	2.8	0.9	0.8	1.0
2011	1.4	-0.1	1.0	2.6
2012	-2.3	1.2	-0.7	0.3
2013	2.0	0.7	0.3	1.0
2014	1.1	0.2	1.2	1.5
2015	-0.7	0.0	0.3	-0.2
<b>2016</b>	<b>-1.5</b>	<b>2.1</b>		

SOURCE: Bureau of Transportation Statistics



## **Brief Explanation of the TSI**

The Transportation Services Index (TSI) is a measure of the month-to-month changes in the output of services provided by the for-hire transportation industries. The freight index measure changes in freight shipments while the passenger index measures changes in passenger travel.

The TSI tells us how the output of transportation services has increased or decreased from month to month. The index can be examined together with other economic indicators to produce a better understanding of the current and future course of the economy. The movement of the index over time can be compared with other economic measures to understand the relationship of changes in transportation output to changes in Gross Domestic Product (GDP).

### **The freight transportation index** consists of:

For-hire trucking,

Railroad freight services (including rail based intermodal shipments such as containers on flat cars),

Inland waterways transportation,

Pipeline transportation (including principally petroleum and petroleum products and natural gas), and

Air freight.

The index does not include international or coastal waterborne movements, private trucking, courier services, or the US Postal Service.

### **The passenger transportation index** consists of:

Local transit,

Intercity passenger rail, and

Passenger air transportation.

The index does not include intercity bus, sightseeing services, ferry services, taxi service, private automobile usage, or bicycling and other non-motorized transportation.